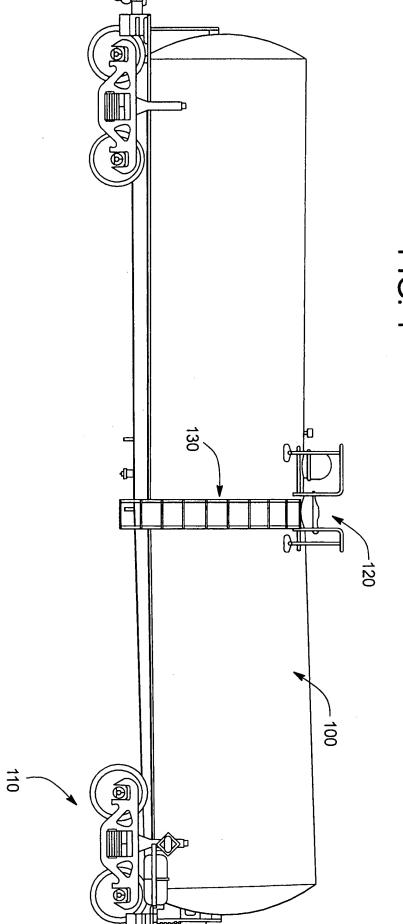
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Filing Date: September 29, 2000
U.S. Patent Application No. 09/672,793
Title: Method and Arrangement for Inspection and Requalification of...
Patent Agent: Stephen T. Scherrer (Reg. No. 45,080)
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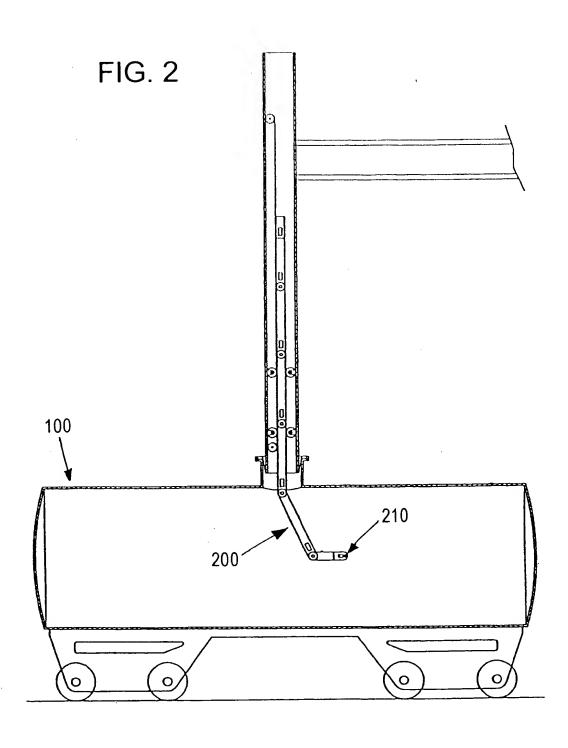


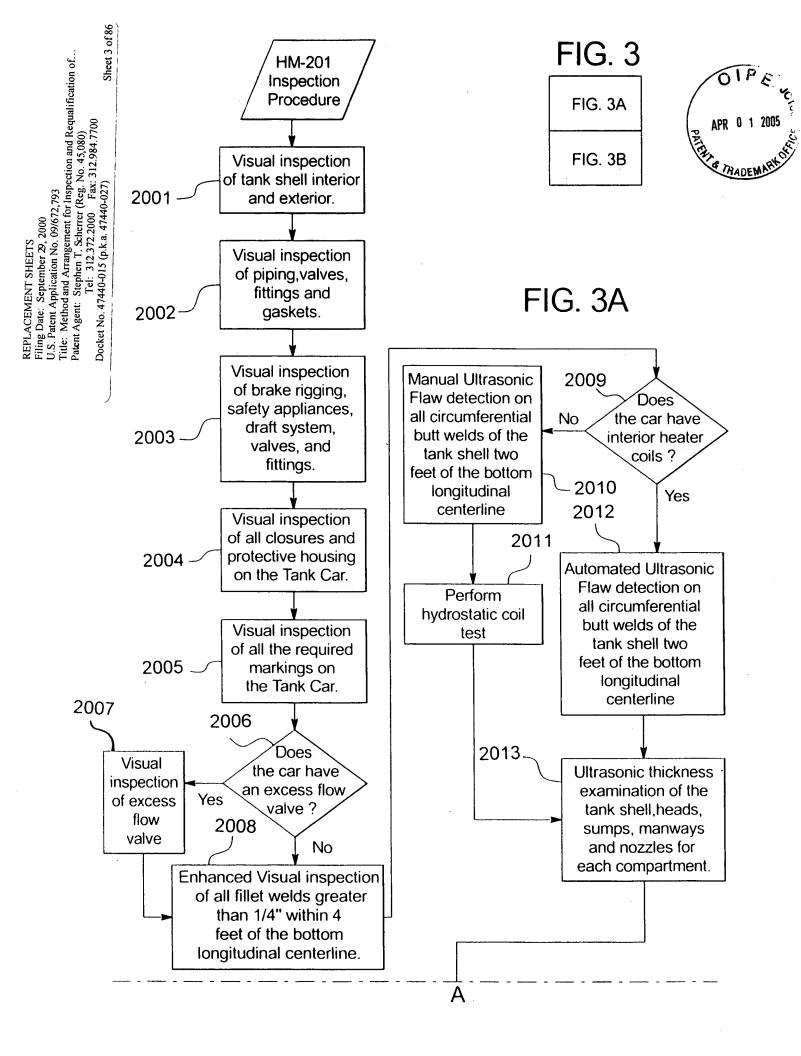
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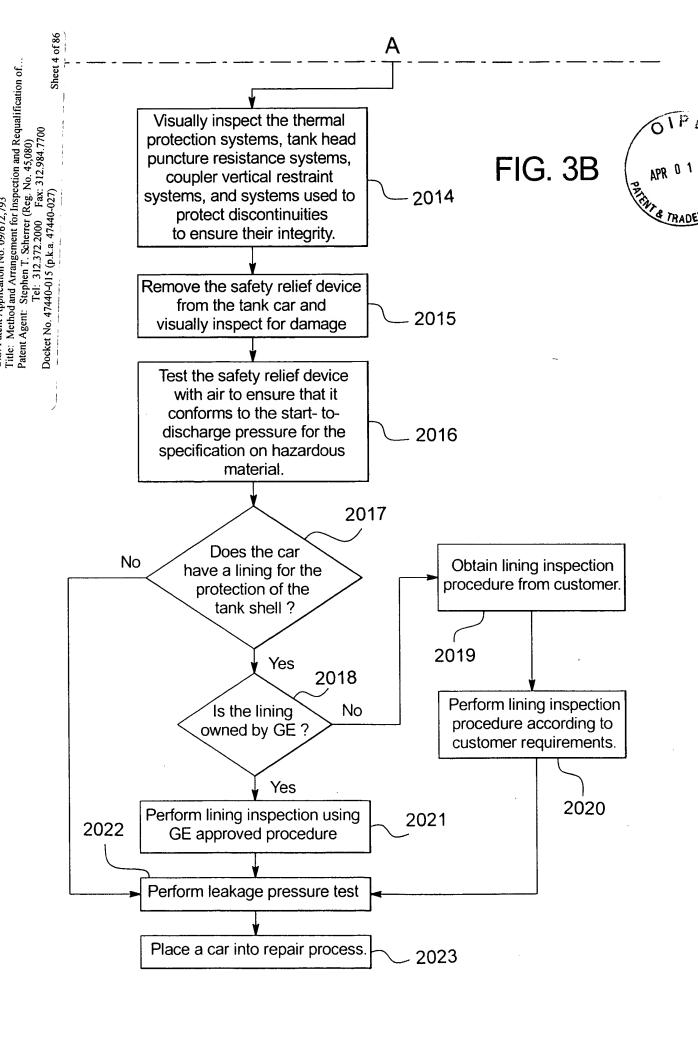
Filing Date: September 29, 2000
U.S. Patent Application No. 09/672,793
Title: Method and Arrangement for Inspection and Requalification of...
Patent Agent: Stephen T. Scherrer (Reg. No. 45,080)
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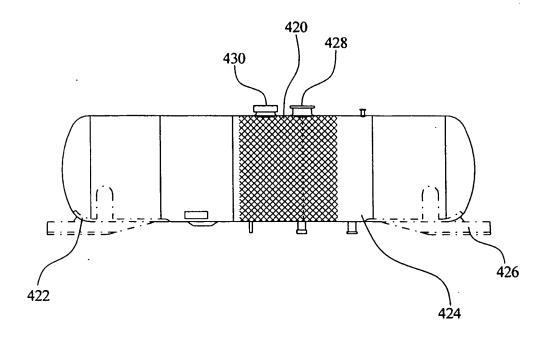


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Title: Method and Arrangement for Inspection and Requalification of...
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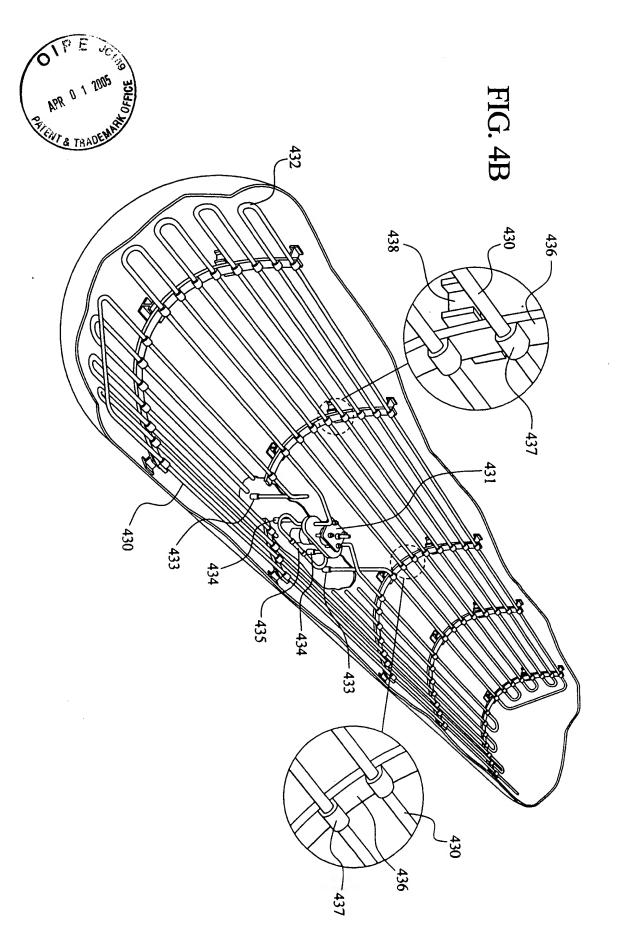
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FIG. 4A



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FIG. 4C

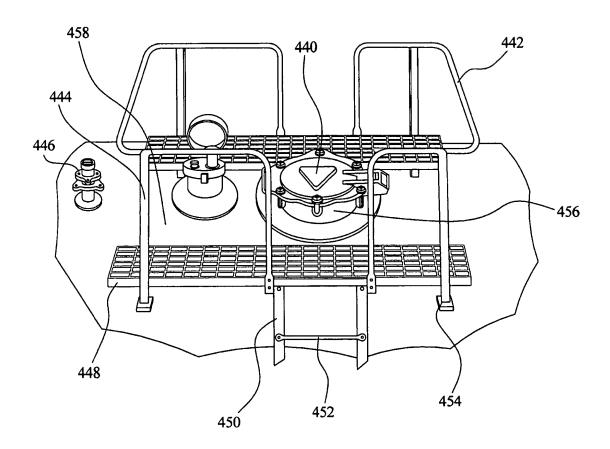


FIG. 4D

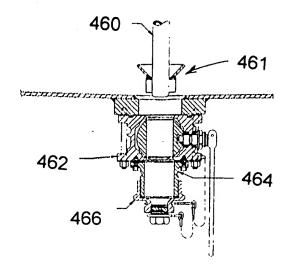
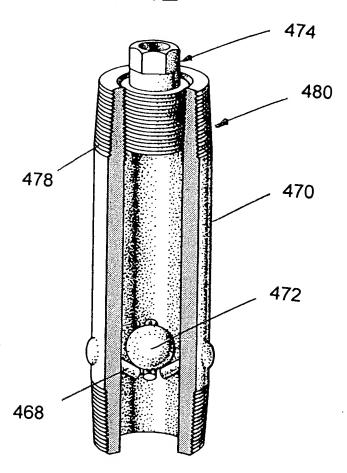


FIG. 4E





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Docket No. 47440-015 (p.k.a. 47440-027)

FIG. 5A

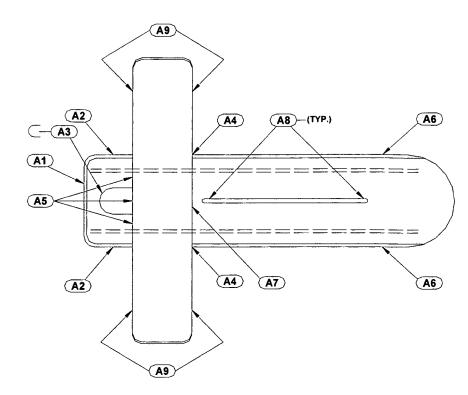
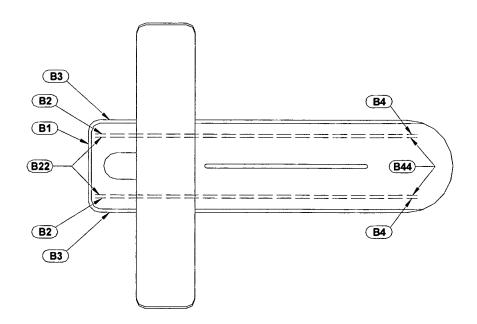


FIG. 5B





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FIG. 4F Docket No. 47440-015 (p.k.a. 47440-027)

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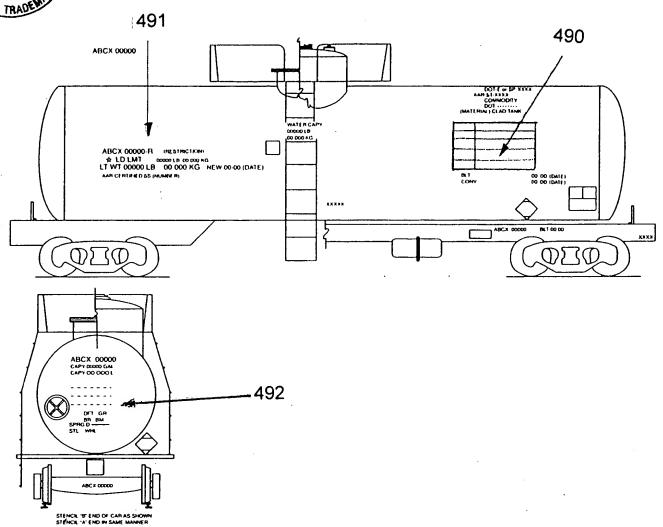


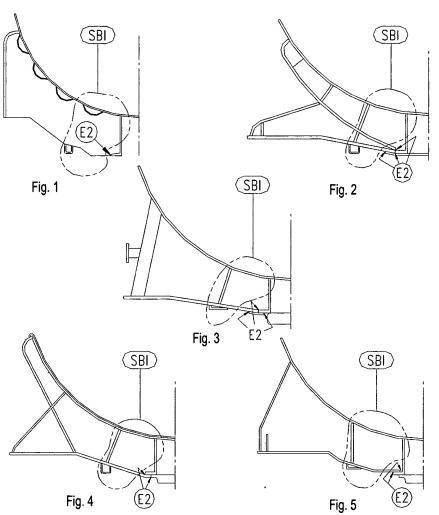
FIG. 4G

		41_3/4"		
A		STATION STENCIL	QUALIFIED	DUE
17 1/4"	TANK QUALIFICATIO	N	!	
	SERVICE EQUIPMEN	IT		
	(1a) (1b)			
	(2a) (2b)		<u> </u>	
	COATING/LININ	<u>انا</u>		
	TYPE (3a)			
	DATE APPLIED (3b)			
Ť	88.B.2 INSPECTIO	N		

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FIG. 5D

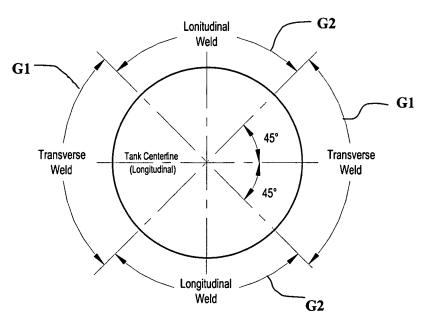
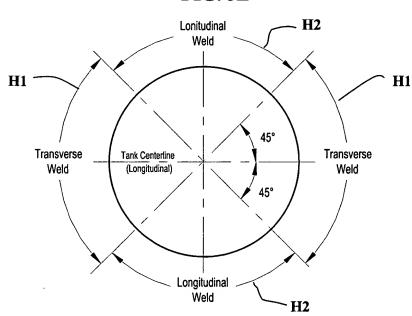


FIG. 5E



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Transverse
Weld

Transverse
Weld

Tank Centerline
(Longitudinal)

Longitudinal
Weld

J2

Transverse
Weld

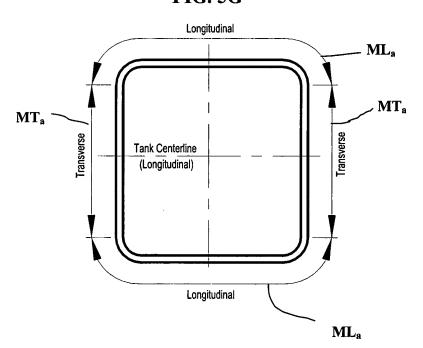
J2

Transverse
Weld

J2



FIG. 5G



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U.S. Patent Application No. 09/672,793

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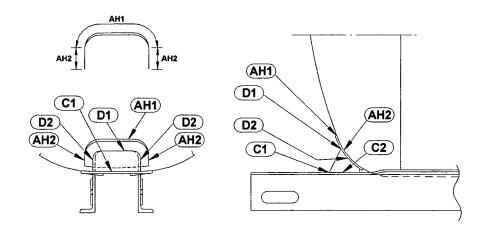
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Tel: 312.372.2000 Fax: 312.984.7700

Docket No. 47440-015 (p.k.a. 47440-027) Sheet 14 of the stephen and Requalification of...

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FIG. 5H

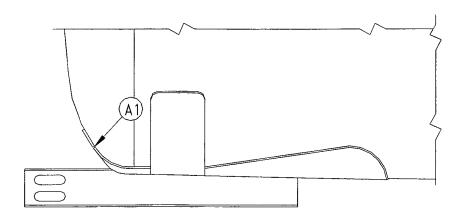


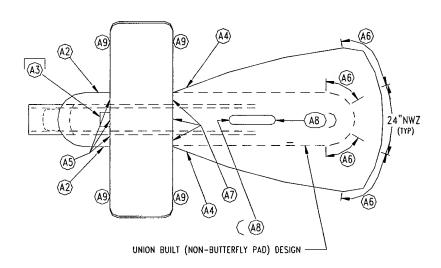


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FIG. 6A







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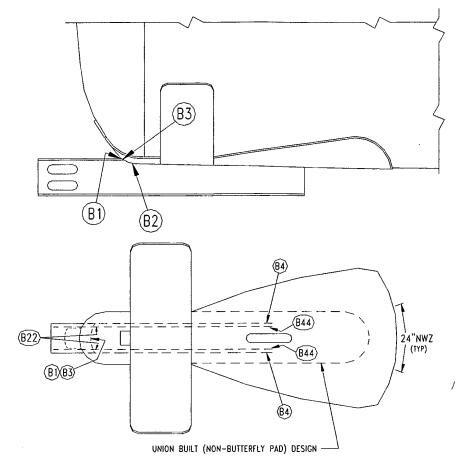
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Tel: 312.372.2000 Fax: 312.984.7700
Docket No. 47440-015 (p.k.a. 47440-027)

FIG. 6C OSB OSB SBI (SBI) OSB (SBI) OSB OSB (SBI) (SBI)



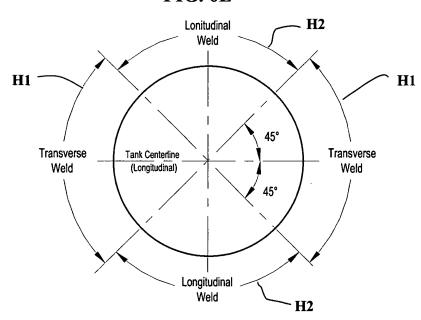
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Title: Method and Arrangement for Inspection and Requalification of...
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FIG. 6D G2 Lonitudinal Weld G1 G1 45° Transverse Transverse Tank Centerline (Longitudinal) Weld Weld 45° Longitudinal Weld G2



FIG. 6E

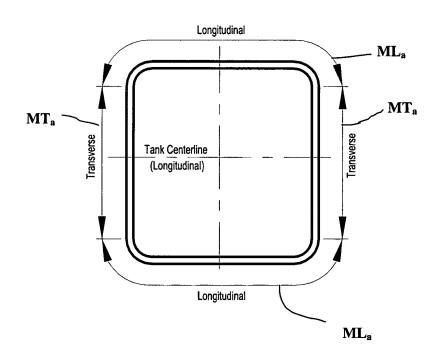


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FIG. 6F J2 Longitudinal Weld J1 J1 45° 45° Transverse Weld Transverse Weld Tank Centerline (Longitudinal) 45° 45° Longitudinal Weld J2

FIG. 6G





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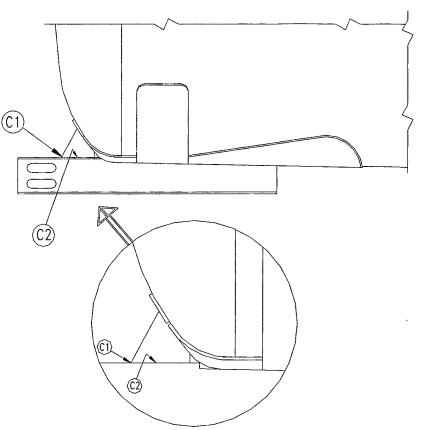
FIG. 6H (AH2) (AH1) (AH2) (AH1)



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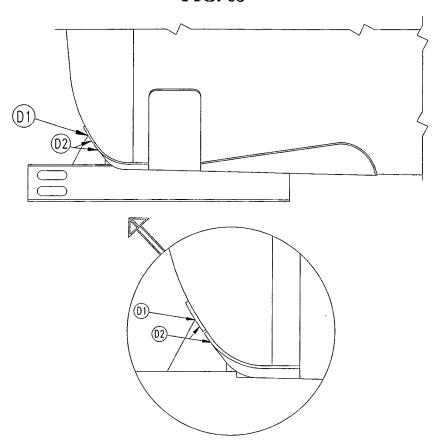
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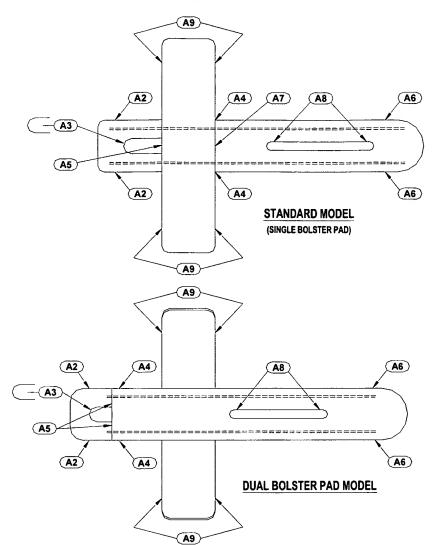
FIG. 6J





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FIG. 7A

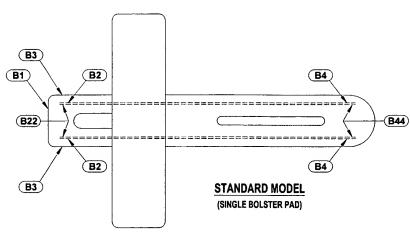




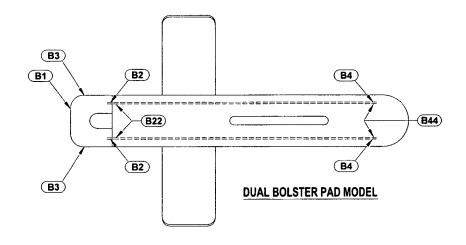
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FIG. 7B



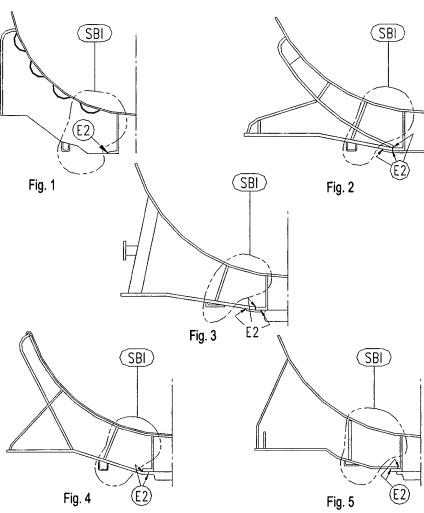




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FIG. 7C





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FIG. 7D

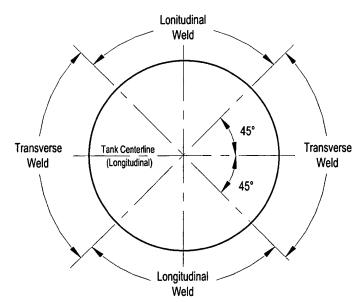
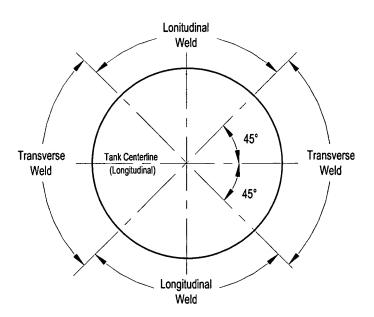


FIG. 7E

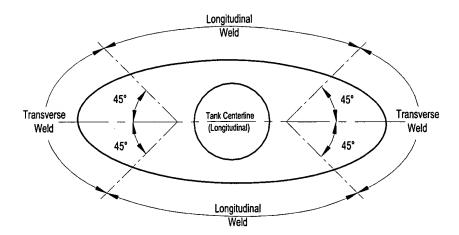




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Docket No. 47440-015 (p.k.a. 47440-027)

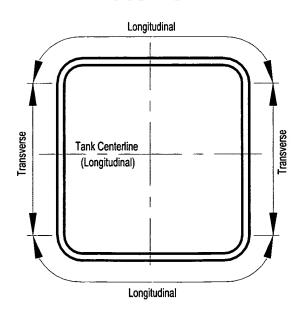
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FIG. 7F



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FIG. 7G



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FIG. 7H AH1 AH2 (AH1) **D1 C1 D1**) AH2 D2 AH2 D2 AH2 (D2) (C2) **C1**



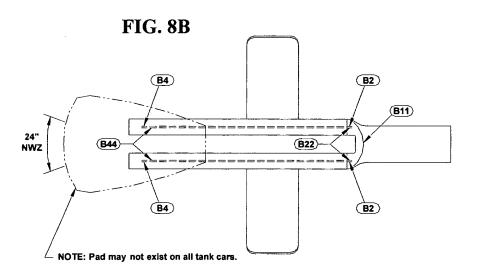
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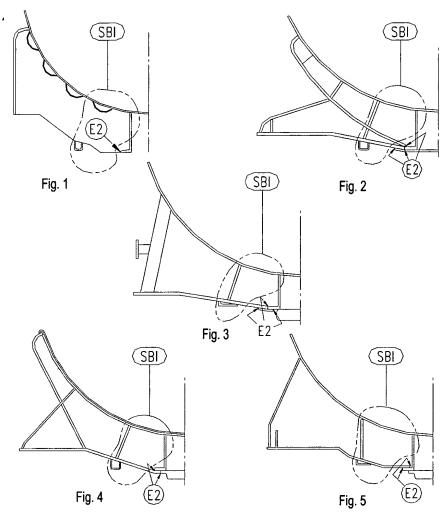
FIG. 8A (A9) (A2) (A6) **A7** (A13) 24" NWZ **A15 A24** A1)-] (A13) <u>A4</u> (A6) (A2) ∠ NOTE: Pad may not exist on all tank cars. **A9**





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FIG. 8C





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FIG. 8D

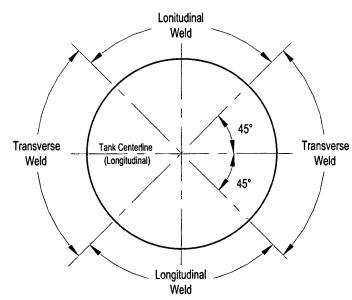
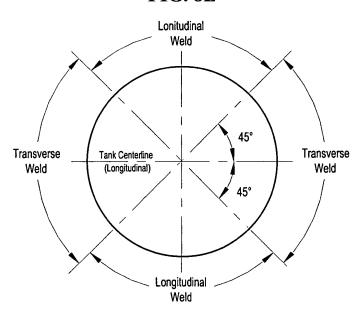


FIG. 8E





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FIG. 8F

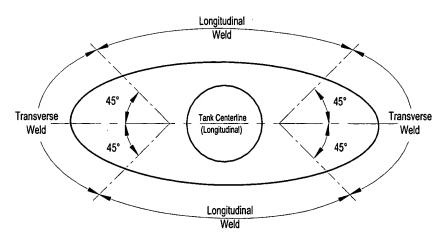
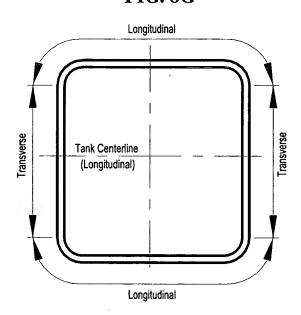


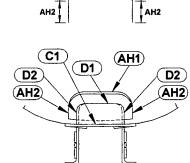


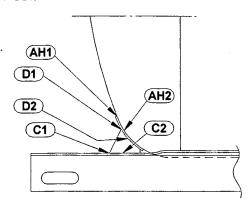
FIG. 8G



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Title: Method and Arrangement for Inspection and Requalification of...
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Tel: 312,372,2000 Fax: 312,984,7700
Docket No. 47440-015 (p.k.a. 47440-027)

FIG. 8H

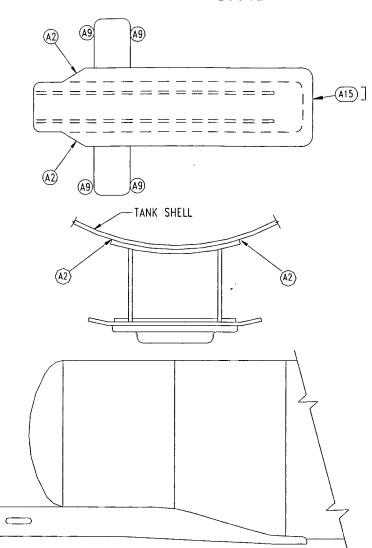






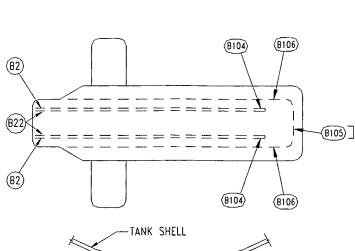
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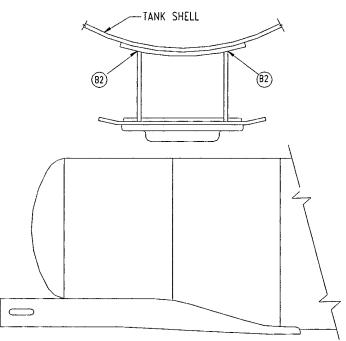




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FIG. 9B







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FIG. 9C (OSB) OSB SBI (SBI) OSB (SBI) OSB OSB (SBI) (SBI)



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Tel: 312,372,2000 Fax: 312,984,7700
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FIG. 9D

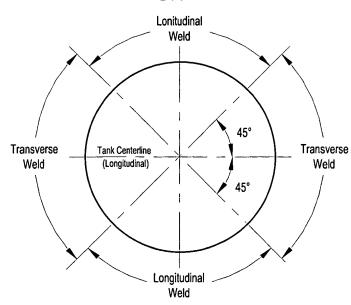
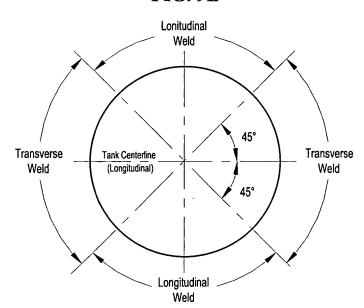


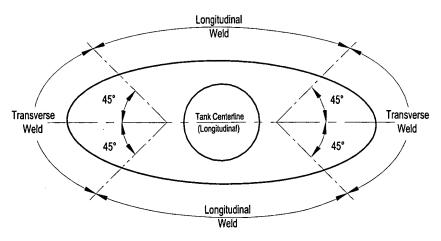


FIG. 9E



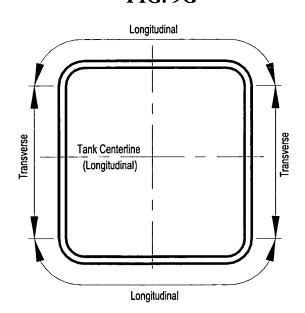
REPLACEMENT SHEETS
Filing Date: September 29, 2000
U.S. Patent Application No. 09/672, 793
Title: Method and Arrangement for Inspection and Requalification of...
Patent Agent: Stephen T. Scherrer (Reg. No. 45,080)
Tel: 312.372,2000 Fax: 312,984,7700
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FIG. 9F



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FIG. 9G



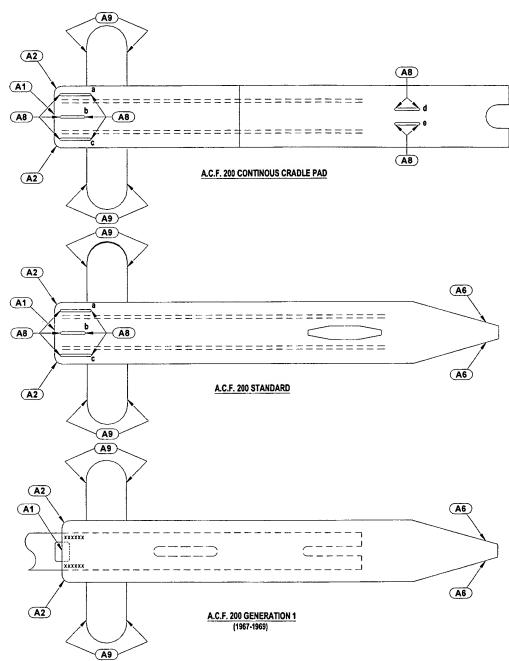
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Filing Date: September 29, 2000
U.S. Patent Application No. 09/672,793
Title: Method and Arrangement for Inspection and Requalification of...
Patent Agent: Stephen T. Scherrer (Reg. No. 45,080)
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FIG. 10A



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Title: Method and Arrangement for Inspection and Requalification of...

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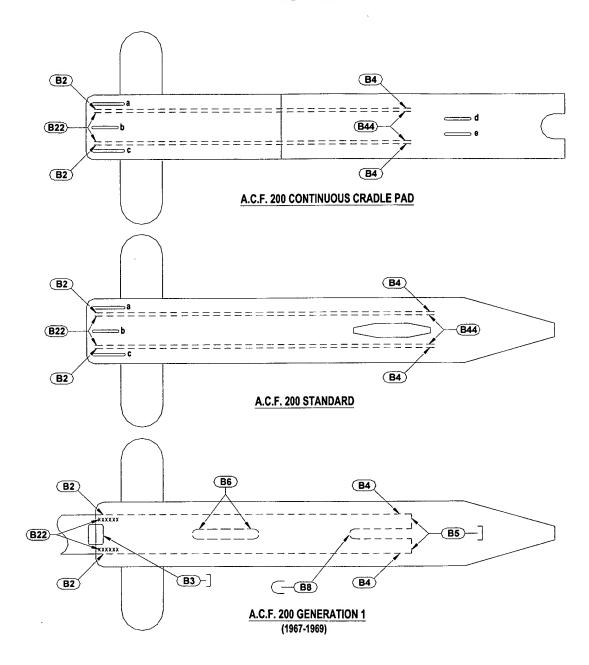
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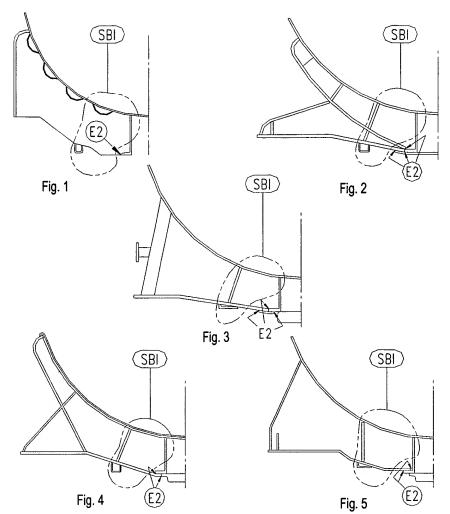


FIG. 10B



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Tel: 312.372.2000
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FIG. 10C





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Tel: 312,372,2000 Fax: 312,984,7700 Docket No. 47440-015 (p.k.a. 47440-027)

FIG. 10D

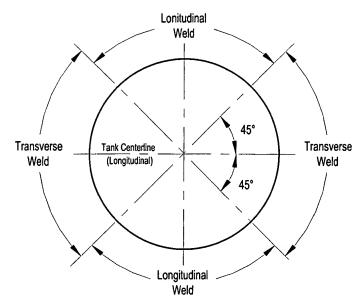
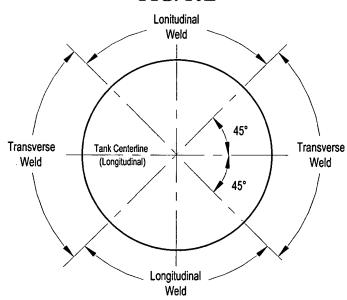


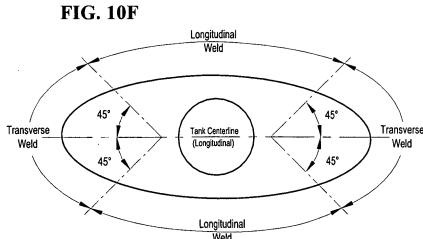


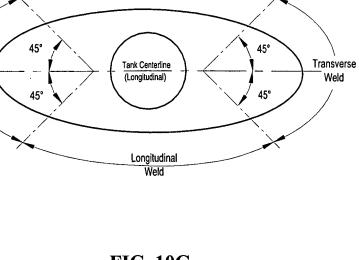
FIG. 10E



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Title: Method and Arrangement for Inspection and Requalification of...
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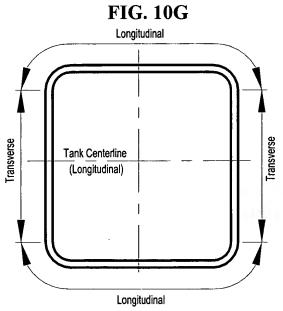
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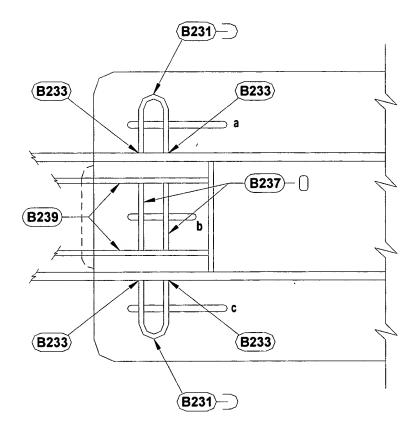
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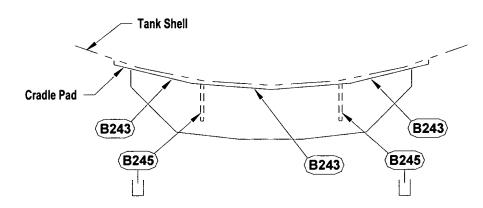


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Patent Agent: Stephen T. Scherrer (Reg. No. 45,080)
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FIG. 10H



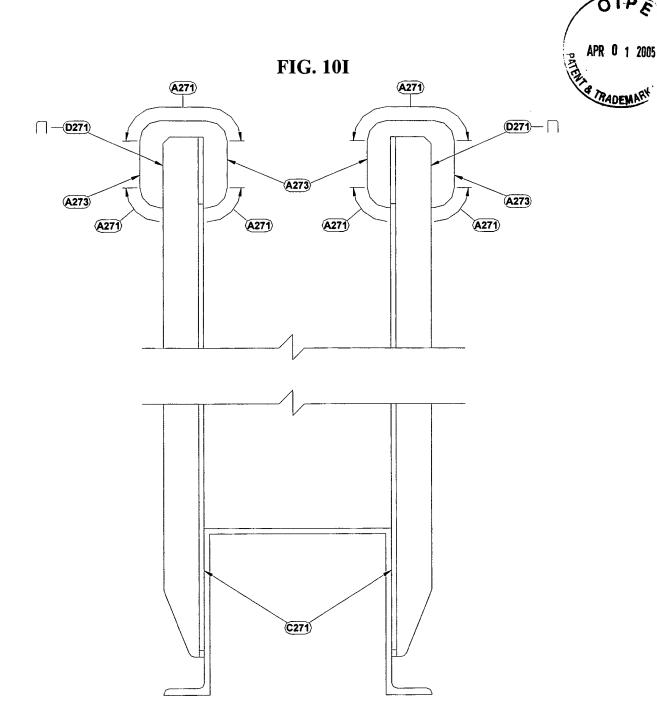
NOTE: Outboard of bolster, wing bar not shown for clarity.



<u>NOTE</u>: Inboard of bolster at end of cradle pad, looking outboard.

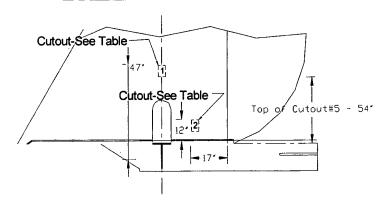


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Filing Date: September 29, 2000
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Typical ACF 200 Built Car



Drawings Not to Scale Jacket Removed for Clarity

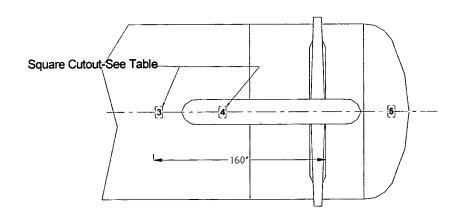
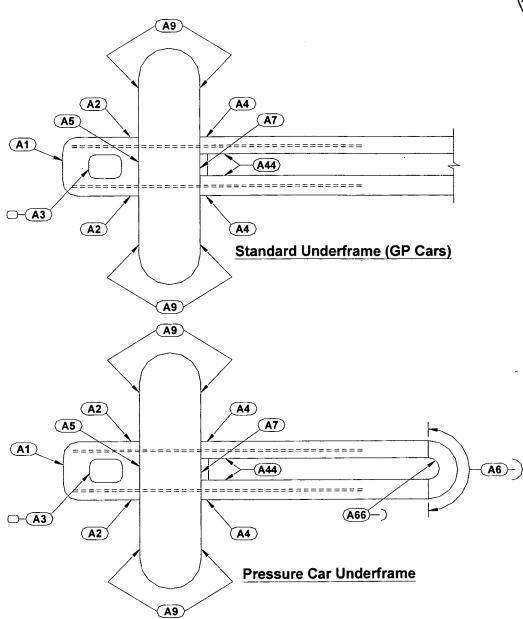


FIG. 11A



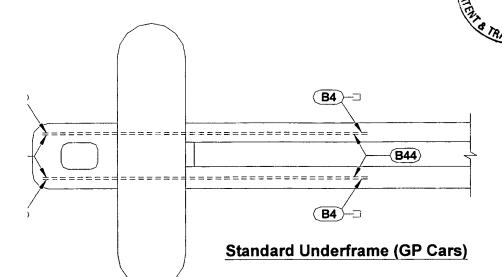


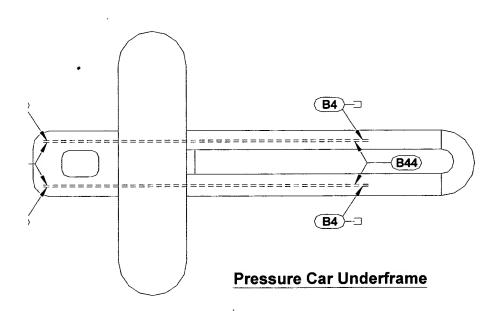
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FIG. 11B

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Fig. 5

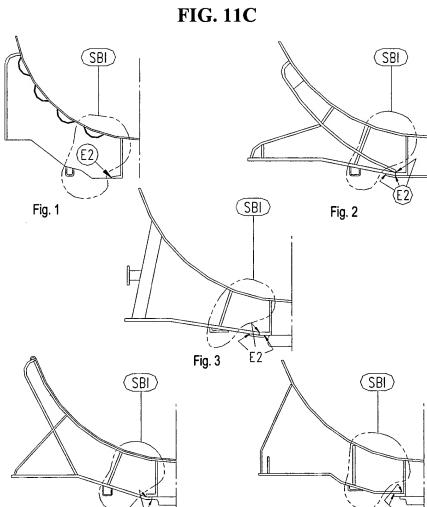


Fig. 4

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Tel: 312,372,2000 Fax: 312,984,7700 Docket No. 47440-015 (p.k.a. 47440-027)

FIG. 11D

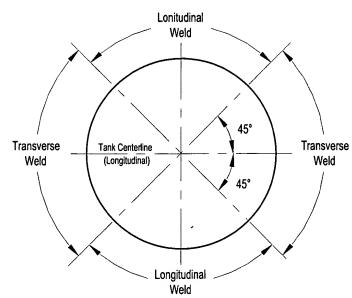
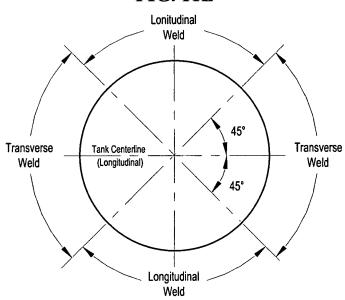


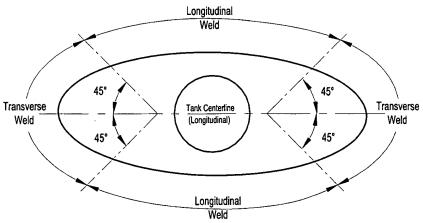


FIG. 11E



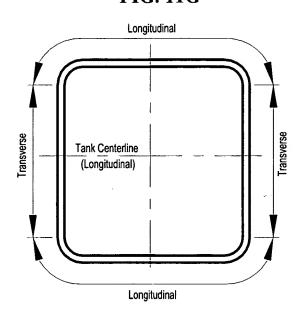
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Title: Method and Arrangement for Inspection and Requalification of...
Patent Agent: Stephen T. Scherrer (Reg. No. 45,080)
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FIG. 11F



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FIG. 11G



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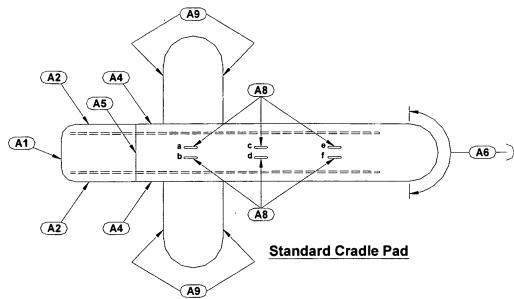
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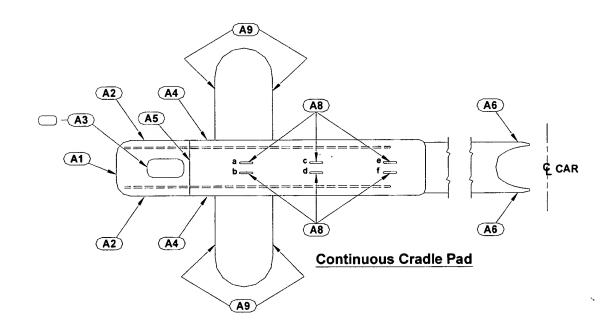
FIG. 11H AH1 AH2 AH1 **D1 C1** AH2 (D1) D2 AH2 D2 AH2 (D2) (C2) **C1**



FIG. 12A







REPLACEMENT SHEETS

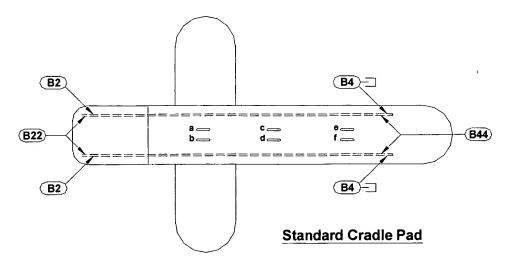
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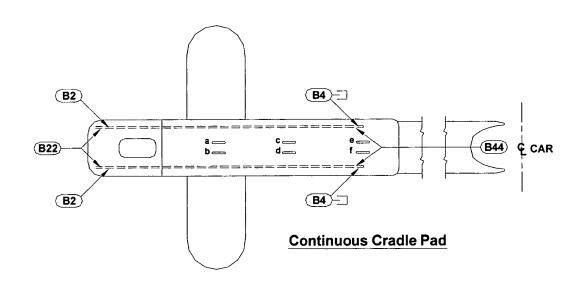
U.S. Patent Application No. 09/6/2,/93
Title: Method and Arrangement for Inspection and Requalification of...
Patent Agent: Stephen T. Scherrer (Reg. No. 45,080)
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FIG. 12B







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FIG. 12C

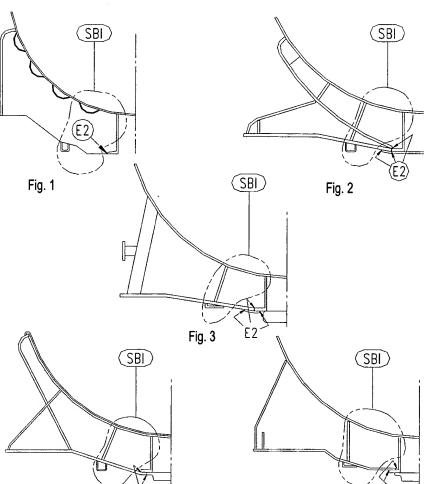


Fig. 5

Fig. 4



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FIG. 12D

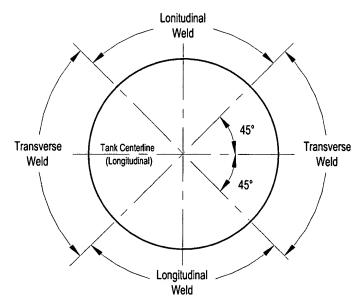
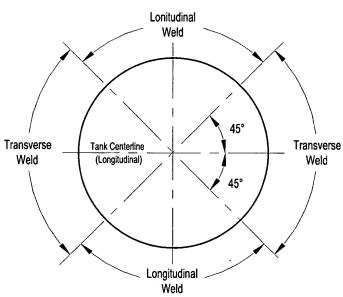
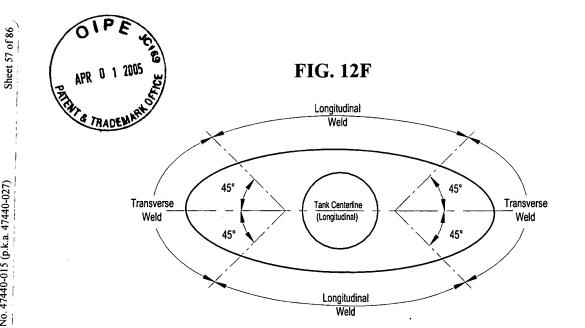


FIG. 12E

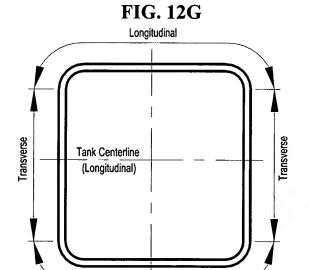




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Longitudinal

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FIG. 12H AH1 AH2 AH2 (AH1) **D1 C1** AH1 (D1) AH2 D2 AH2 **D2 D2** AH2 (C2) **C1**



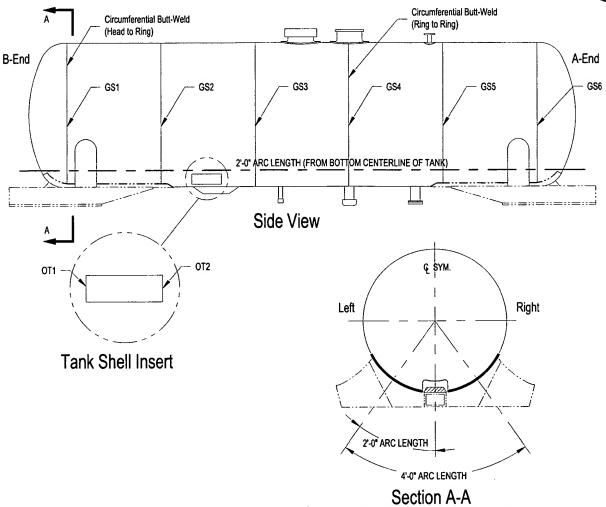
REPLACEMENT SHEETS Filing Date: September 29, 2000 U.S. Patent Application No. 09/672,793

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Patent Agent: Stephen T. Scherrer (Reg. No. 45,080)
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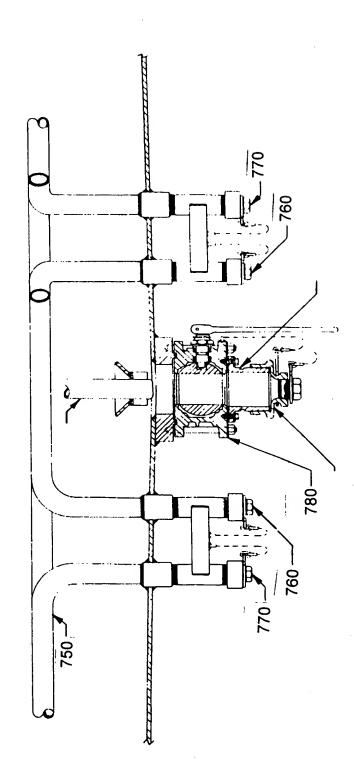
(Looking Outboard from Inside of Tank)

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FIG. 13B





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Tel: 312.372.2000 Fax: 312.984.7700

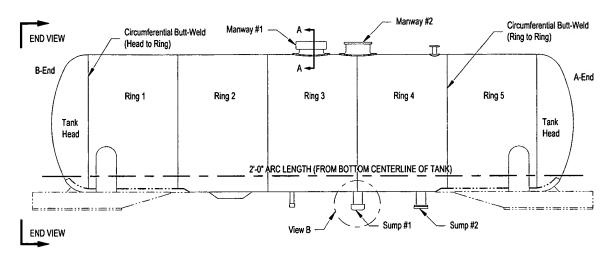
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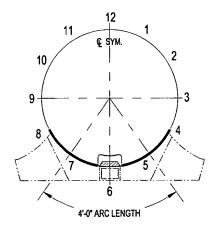
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FIG. 14A





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Docket No. 47440-015 (p.k.a. 47440-027) Sheet 62 of Sheet 62 of 86 FIG. 14B 12 **B-END** X 9 3 A-END 6 3" **FIG. 14C** ${\sf He_{ad-to-Ring}}$ ${\sf Weld}$ Thickness Readings Location (A-End) A-END Ring #2 ${\sf Head}$ -to-Ring ${\sf Weld}$. 12 Ring #1 9

B-END

6

FIG. 15A

TABLE 1: ALLOWABLE SAFETY RELIEF VALVE PRESSURE TOLERANCES

Nominal STD ¹ (psig)	Tolerance (+/-) ⁴ (psig)	Minimum STD ¹ (psig)	Maximum STD ¹ (psig)	Minimum VTP ² (psig)	Gauge Range⁵ (psig)	Maximum Gauge Increment ⁵ (psig)
35	3	32	38	28	0-100	1
75	3	72	78	60	0-150/160	1
150	4.5	145.5	154.5	120	0-300	2
225	6.75	218.25	231.75	180	0-400	5
247.5	7.4	240.1	254.9	196	0-400	5
255	7.7	247.3	262.7	204	0-400	5
280.5	8.4	272.1	288.9	224	0-500	5
300	9	291	309	240	0-500	5
330	10	320	340	264	0-500	5
375	11.25	363.75	386.25	300	0-600	10
450	13.5	436.5	463.5	360	0-750	10

NOTES:

- 1. STD indicates start-to-discharge.
- 2. VTP indicates vapor-tight pressure.
- 3. Valves should be set or reset to NOMINAL STD pressure.
- 4. DOT requirements for tolerances are given in 49CFR173.31(c)(6). Pressure tolerances listed above have been shown here to assist testing personnel and are not intended to alter any DOT requirements.
- 5. Digital or dial gauges of greater range may be used if accuracy and sensitivity levels are equal to or better than required above.



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FIG. 15B

TYPICAL INTERNAL STYLE SAFETY RELIEF VALVE Midland A-1075-JVP Design

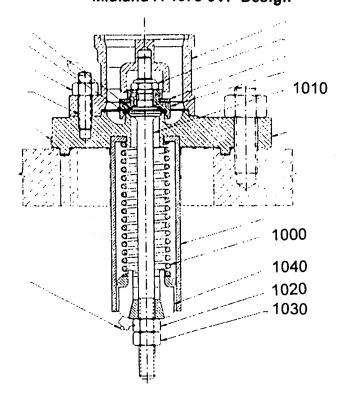
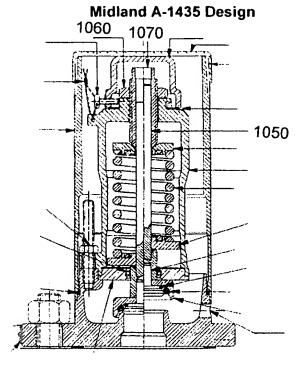


FIG. 15C

TYPICAL TOP MOUNTED SAFETY RELIEF VALVE



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FIG. 15D

TYPICAL SAFETY VENT

Midland A-424 Design

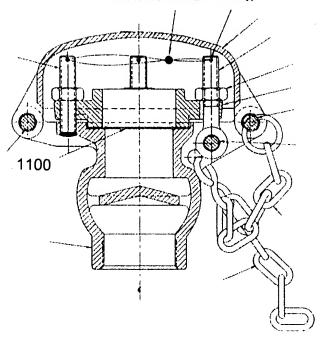
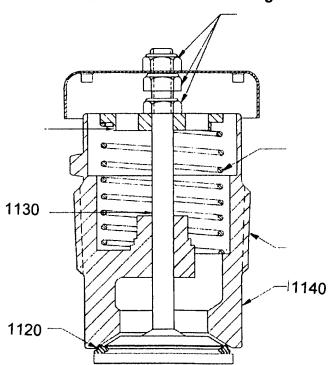


FIG. 15E

VACUUM RELIEF VALVE

Midland A-208-W-10 Design







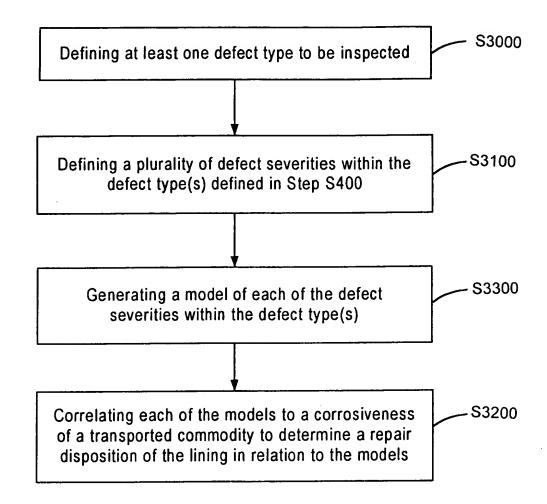


FIG. 16

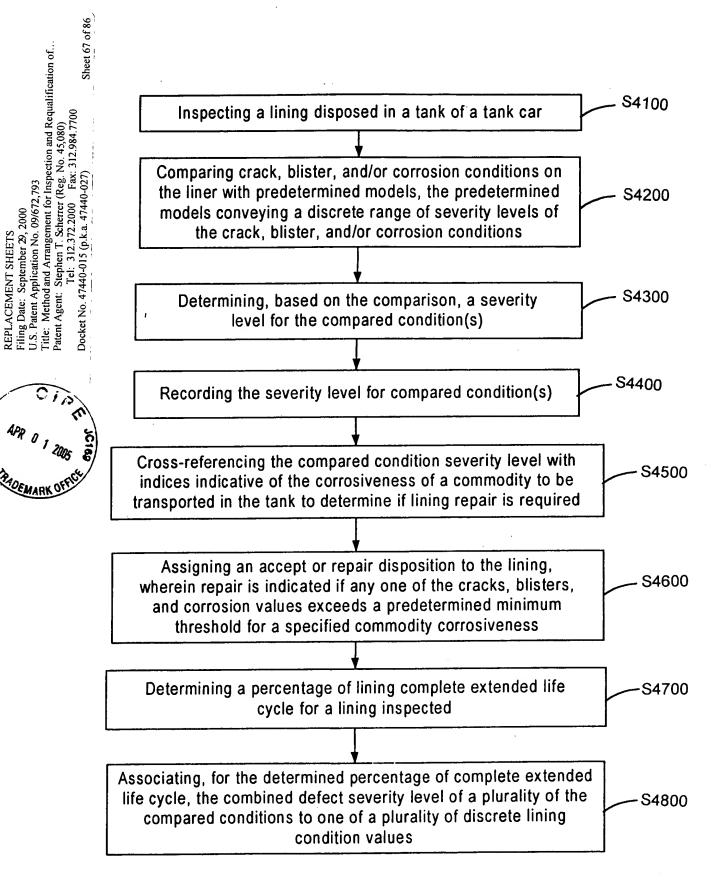


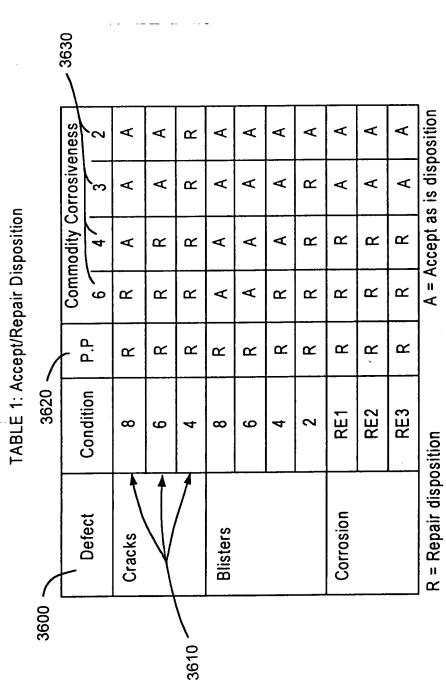
FIG. 17

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FIG. 18A



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FIG. 18B

Lining System Operating Characteristics



Lining System	approx.	Properties	Recommended Service	Failure Criteria	Estimated
	dft			-	Life
(Unmodified) High Bake Phenolic (400°F)	8 to 10 mils in multiple coats	Very good Water Resistance Good Corrosion Resistance High Temperature Resistant Difficult to repair or to touch-up	Organic and Inorganic Acids (concentrated and diluted) Less suitable for strong Alkalis Resistant against most Solvents Can be used for Food Grade Chemicals	Cracking due to mechanical impact (direct or reverse), temperature cycling or vibration. Hydrogen grooving of steel under coating in highly concentrated sulfuric acid.	8 years
(Modified) High Bake Phenolic (400°F)	8 to 10 mils in multiple coats	Very good Water Resistance Good Corrosion Resistance Less brittle than unmodified phenolics	Diluted Organic and Inorganic Acids Good resistance against strong Alkalis Can be used for Food Grade Chemicals Resistant to most Solvents	Cracking due to mechanical impact (direct or reverse), temperature cycling or vibration.	8 years
(Modified) High Bake Epoxy/Amine (400°F)	12 to 15 mils in 2 coats	Very good Water Resistance Good Corrosion Resistance Two-pack materials	Diluted Organic and Inorganic Acids Very good resistance against hot alkalis Good Solvent Resistance	Becomes brittle on aging. May blister in unsuitable chemicals. May crack under impact and bending.	7 years
(Modified) Low Bake Epoxy/Amine (250°F)	12 to 15 mils in 2 coats	Good Water Resistance Good Corrosion Resistance Two-pack materials	Diluted, non oxidizing Inorganic Acids Very good resistance against hot alkalis Good Solvent Resistance	Becomes brittle on aging. May blister and/or soften in certain chemicals. May crack under impact and bending.	7 years
Epoxy/Phenolic/Amine air-dry or force curing	12 to 15 mils	Good Water Resistance Good Corrosion Resistance Two-pack materials	Acidity not lower than pH 2 Very good Alkali Resistance Good Solvent Resistance	Becomes brittle on aging, May blister and/or soften in certain chemicals. May crack under impact and bending	7 years
Epoxy/Amine Solvent Free. Air dry of Force Curing (*)	12 to 15 mils in 1 coat	Good Water Resistance Good Corrosion Resistance Plural Component Appl.	Diluted, non oxidizing Inorganic Acids Very good resistance against Alkalis Good Solvent Resistance	Becomes slightly brittle with aging. May slightly soften in certain solvents. Better Crack and Impact Resistant	8 years
Epoxy/Polyamidoamine Force curing	10 - 14 mils 2 coats	Good Water Resistance Good Corrosion Resistance Two-pack materiáls	Good resistance against diluted alkalis Resistant against some solvents Can be Food Grade Compliant	Becomes slightly brittle with aging. May blister or soften in certain solvents Fair Crack and Impact Resistant.	6 years
Rubber Sheet Lining	N/A	Application using in-situ vulcanizing and adhesives.	Good Acid and Alkali Resistance Not suitable for most Solvents Maximum Temperature 150°F Hard rubber better resistant than soft rubber	Oxidizing chemicals may attack the sheet lining and embrittle. Sheets may loose adhesion. Welds may deteriorate (corrosion)	12 years

REPLACEMENT SHEETS Filing Date: September 29, 2000 U.S. Patent Application No. 09/672,793

Title: Method and Arrangement for Inspection and Requalification of...

Patent Agent: Stephen T. Scherrer (Reg. No. 45,080)

Tel: 312.372.2000 Fax: 312.984.7700

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FIG. 19

TABLE 2: Lining Condition Matrix

					
Complete Extended Life Cycle	Defect Type	Excellent A	Lining C Good B	Fair C	Poor D
0 - 25%	Crack Blister Corrosion DFT	No Defects No Defects No Defects > 8 mils	No Defects > No. 8(2.5%) No Defects > 7 mils	> No. 8 > No. 6(15%) > Re 1 > 6 mils	> No. 6
26 - 42%	Stains Crack Blister Corrosion DFT Stains	No Spots No Defects No. 6(2.5%) No Defects > 7 mils No Spots	No Spots No Defects > No. 6(15%) No Defects > 7 mils No Spots	< 10 Sq. Ft > No. 8 > No. 4(45%) > Re 2 > 6 mils < 20 Sq. Ft	> 10 Sq. Ft > No. 6 > No. 2(15%) > Re 2 < 6 mils > 20 Sq. Ft
43 - 58%	Crack Blister Corrosion DFT Stains	No Defects > No. 6(2.5%) No Defects > 6 mils No Spots	No Defects > No. 6(15%) No Defects > 5 mils <10 Sq. Ft	> No. 8 > No. 4(15%) < Re 2 < 5 mils < 20 Sq. Ft	> No. 4 > No. 4(15%) < Re 2 < 5 mils > 20 Sq. Ft
59 - 83%	Crack Blister Corrosion DFT Stains	No Defects No. 6(15%) No Defects > 5 mils < 10 sq. Ft	No Defects > No. 4(15%) No Defects > 5 mils < 10 Sq. Ft	> No. 6 > No. 2(15%) < Re 2 > 5 mils < 20 Sq. Ft	> No. 4 > No. 2(45%) < Re 2 < 5 mils > 20 Sq. Ft
> 83%	Crack Blister Corrosion DFT Stains	No Defects No. 4(15%) No Defects > 5 mils < 10 sq. Ft	No Defects > Nc. 4(15%) No Defects > 5 mils < 10 Sq. Ft	> No. 4 > No. 4(15%) < Re 2 > 5 mils < 20 Sq. Ft	> No. 4 > No. 4(15%) < Re 3 < 5 mils > 20 Sq. Ft

7.01-	.U	
Work Instruction:	Sketch/Description:	
1. Blistering		- - - - -
A phenomenon peculiar to painted surfaces is the formation of blisters relative to some system weakness. This procedure describes the procedure for determining the size and density of the blisters so that comparisons can be made.	2,5% BLISTERS RESTORED	2,5% BLISTERS COVER
Procedure		AL AREA
Inspect the lining surface for evidence of blistering. Match the visual standards with the actual condition of the lining to determine the size and frequency of the blistering.	FEW	
Size - There are 5 degrees of size on a numerical scale.		
Number 10 - no blistering	15% BLISTE	TERS
Number 8 - smallest blister easily seen by eye	COVER COVER	ER
Number 6 - Small blistering 3860		IOTAL AREA
Number 4 - Medium blistering	MEDIUM	M N
Number 2 - Large blistering		
Frequency – There are 3 degrees of frequency for each category of size which describe the density of the number of blisters formed in a local area	45% BLISTERS	TERS
Code MD - Medium Dense 3850 ———	COVER	H
Code M - Medium		IOIAL AREA
Code F. Few	A STATE OF	MEDIUM DENSE
Reporting: Record the size of the largest area of damage. This will be a No. code.	3810 3830	2040
Record the density of the largest area of damage. This will be a letter code. Indicate weather the Blistering is scattered or localized If it is localized indicate the number of areas		
	Blister size No 8 Blister size No 6 Blister size No 4 Blister size No 6 Blister size No 4 Blister size No 6 Blister size No 7 Blister size No 7 Blister size No 8 Blister size	Blister size No 2
	-	



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Title: Method and Arrangement for Inspection and Requalification of... Patent Agent: Stephen T. Scherrer (Reg. No. 45,080) U.S. Patent Application No. 09/672,793

A TANCEMARY

Tel: 312.372.2000 Fax: 312.984.7700 Docket No. 47440-015 (p.k.a. 47440-027)

Work Instruction:

2. Cracking

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FIG. 21

3920 è. 3900 3910 Sketch/Description Code S. Sigmoid Type - Cracking in which the breaks in the film form a pattern consisting Cracking is a condition that occurs when there is a break in the film surface that extends to the substrate. Where this is difficult to determine the break should be evaluated with a Since the type and degree of failure may vary over any given area, a representative portion of curves meeting and intersecting usually on a large scale. See adjacent Visual Standards Reporting: Record the combination size and density of the largest area of damage. This will be a No. Visually compare the surface with the photographic reference standards to determine the Code L. Line Type - Cracking in which the breaks in the film are generally arranged in minimum of 10X magnification and only be called a crack if the underlying surface is Code I. Irregular Pattern Type - Cracking, in which the breaks in the film are in no

parallel lines, usually horizontally or vertically over the surface.

size and density of the cracking.

Procedure

visible.

Three categories of cracking:

definite pattern.

Record the type of cracking. This will be a letter code. Indicate weather the cracking is scattered or localized

Code.

should be rated.

If it is localized indicate the number of areas

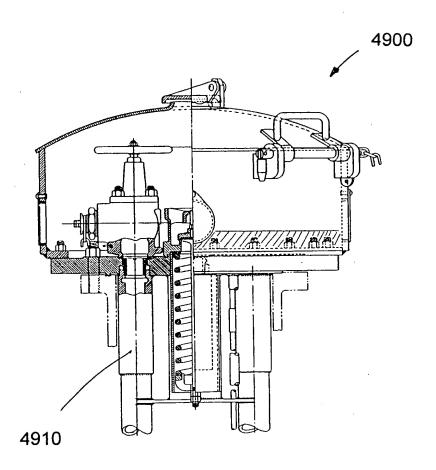
APR 0 1 2005 Localized 4030 1020 Scattered Re 2 Re 3 Re 4 Re 1 4010 Sketch/Description: 4000 This test method covers the evaluation of the degree of rusting on painted steel surfaces Record the combination scale of degree of rusting and the density of the largest area of FIG. 22 4020 Visually compare the surface with the photographic reference standards to determine using visual standards. The amount of rusting beneath or through a paint film is a significant factor in determining weather a coating system should be repaired or Be careful not confuse dirt or staining from rust with actual rusting. Sheet 73 of 86 Title: Method and Arrangement for Inspection and Requalification of... Indicate weather the rusting is scattered or localized If it is localized indicate the number of areas Patent Agent: Stephen T. Scherrer (Reg. No. 45,080) Tel: 312.372.2000 Fax: 312.984.7700 Docket No. 47440-015 (p.k.a. 47440-027) Re 1 - smallest corrosion easily seen by eye Corrosion may be scattered or localized Re 3 - Medium amounts of corrosion Re 2 - small amounts of corrosion Re 4 - large amounts of corrosion damage. This will be a Re code. U.S. Patent Application No. 09/672,793 the scale of degree of rusting. Filing Date: September 29, 2000 REPLACEMENT SHEETS Work Instruction: Corrosion Procedure Reporting: replaced.

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FIG. 23



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**Arrangement for Inspection and Requalification of...

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FIG. 24A



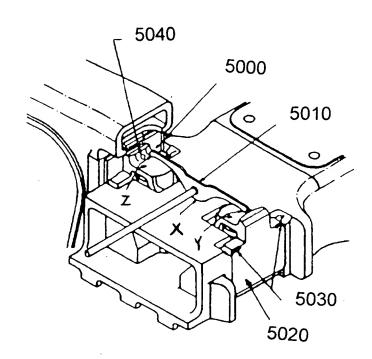


FIG. 24B

Type of Truck	Repair When Total Clearance Between Bolster and Truck Side Frame Columns Reaches:		Repair to These Nominal Clearance Dimensions Between Bolster and Truck Side Frame:		
	Lateral (inches)	Longitudinal (inches)	Late Inside (inches)	Outside (inches)	Total Longitudinal (inches)
Trucks WITH built-in snubbing features having roller bearings which provide lateral (all bearing sizes): or having 5" x 9" or 5 ½" x 10" roller bearings which provide no bearing lateral.	1 1/8"	*	1/4"	1/4"	*
Trucks with built-in snubbing features having 6" x 11", 6 ½" x 12" or 7" x 12" roller bearings which provide no bearing lateral.	1 1/2"	*	1/2" **	1/2" **	*

^{*} Longitudinal clearances are primarily a matter of wear of frame or bolster column wear plates, friction shoes and bolster or frame column surfaces. See maintenance instructions from truck designer of manufacturer.

^{** 1/4&}quot; and 5/8" clearances are acceptable on bolsters manufactured prior to 1987.



FIG. 24C

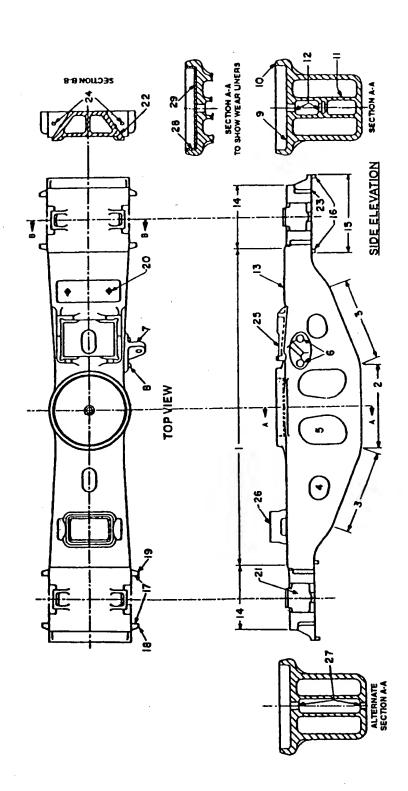
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REPLACEMENT SHEETS



- Top or Compression Member Bottom Center Member
- Diagonal Tension Member
 - Sidewall Lightener Holes **Brake Rod Holes**
- Dead Lever Lug Retainer Holes
- Dead Lever Lug (Right Hand) Shown
 - Dead Lever Lug Rivets or Bolts
- Center Plate Bearing Surface
 - Center Plate Rim 11. Center Post
- 12. King Pin Well
- 13. Side Bearing Pads
 - 15. Spring Seats 14. Ends
- 16. Spring Seat Lugs

Outer Column Guides-Gibs Columns

∞.

- Side Bearing Rivet or Bolt Holes Inner Column Guides-Gibs 19.
 - Friction Wedge Pockets
- Friction Wedge Bearing Surfaces 22. 23. 24.
 - Spring Seats
- Friction Wedge Retaining Pin Openings
- C-Pep Pocket
- Locking Center Pin Opening Side Bearing Pocket 25. 26. 27.
- Center Plate Vertical Ring Wear Line
- Center Plate Horizontal Wear Liner 28. 29.

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FIG. 24D

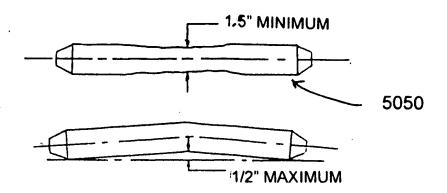


FIG. 24E

-			Pittsburgh Steel		4.52	
<u>Bettendorf</u>	<u>Buckeye</u>	<u>ASF</u>	Foundry	Scullin Steel		<u>eel</u>
UT456	3-1776	7273	3-1673	4665	5364	5869-B
Dresser	F-420	7323	3-1674	4770	5364-C	5917-A
TF5105	F-535	21182	4-1862	4891	5364-E	6260-C
Dominion		21362	4-2045	4942	5413-B	6260-D
TF-5100		<u>.</u>	12897	5171	5483-A	6428-A
Canadian Steel			12921	5220	5483-B	6577-A
Foundry			21263	5321-A	5600-A	6656
26565				5321-B	5600-B	6673-A
				5321-C	5600-C	7207
•				5321-F	581 I-A	42-CS-180
		1		5321-H	5869-A	

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FIG. 24F



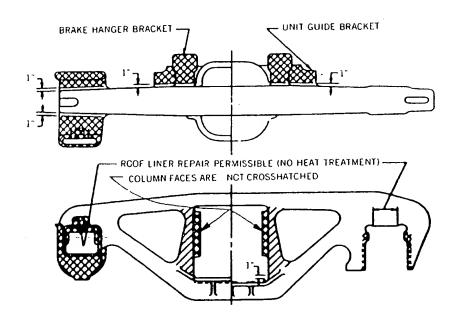
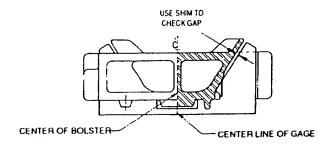
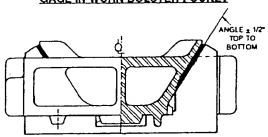


FIG. 24G



GAGE IN WORN BOLSTER POCKET

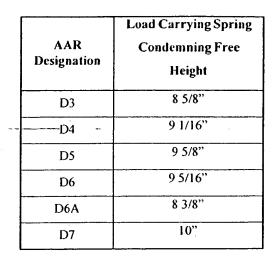


GAGE IN REPAIRED BOLSTER POCKET

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FIG. 24H





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FIG. 25A

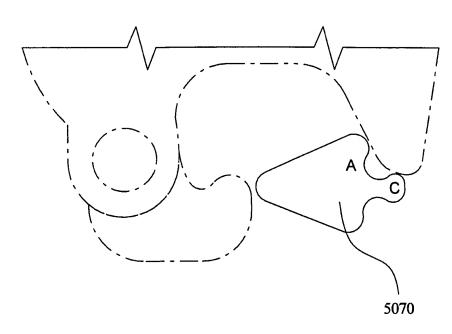


FIG. 25B

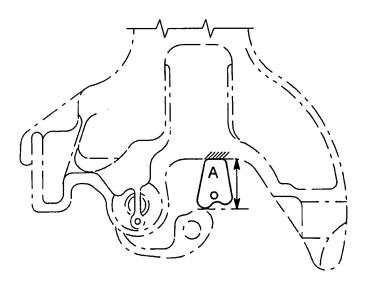




FIG. 25C

FIGURE C-1

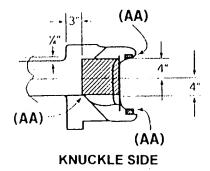


FIGURE C-2

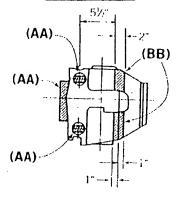
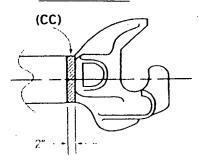
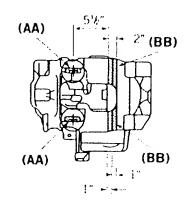


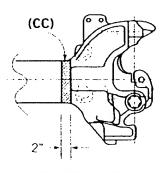
FIGURE C-3



F-TYPE COUPLERS



KNUCKLE FRONT



KNUCKLE TOP

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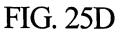
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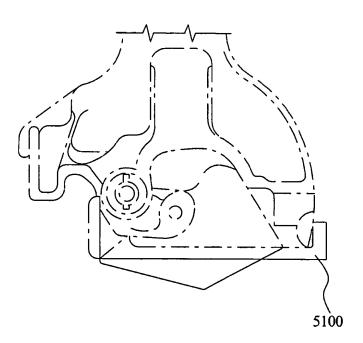
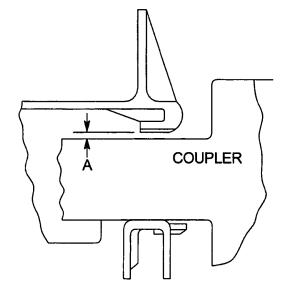


FIG. 25E





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FIG. 25F



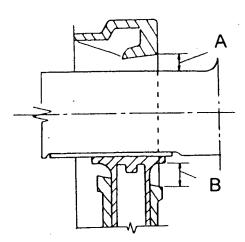


FIG. 25G

Coupler Type	Min. Clearance Top of Shank to Striker Dimension "A" (inches)	Min. Clearance Spring Basket Top to Underside of Carrier Lip. Dimension "B" (inches)
F70, F71, F72, SF70 29 1/4" Length	1 1/8"	1 5/8"
F79, SF79 43" Length	2 3/8"	3 1/2"

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FIG. 25H

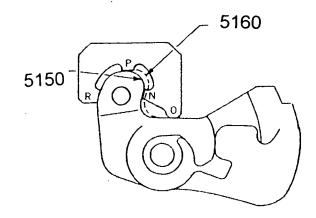
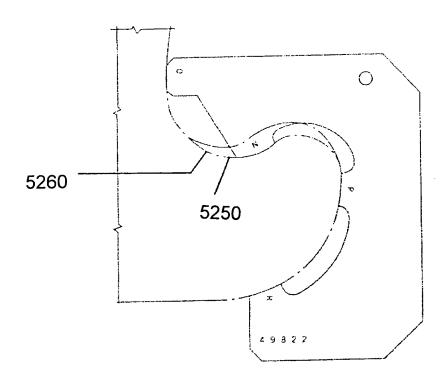


FIG. 251



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FIG. 25J



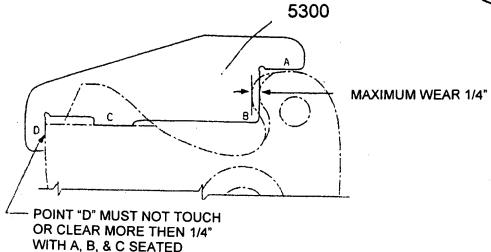
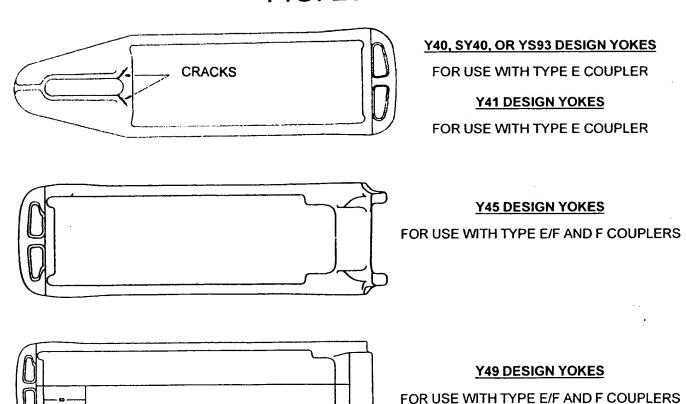


FIG. 25K



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FIG. 26A



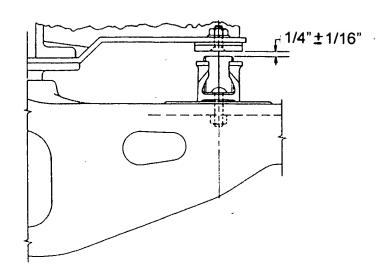


FIG. 26B

